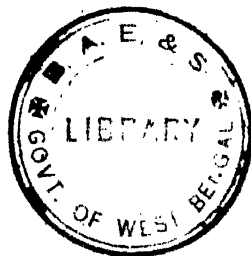


**Government of West Bengal**

**State Statistical Bureau**

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# **Button Industry in Nadia and Murshidabad—A Type-study**

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# Button Industry in Nadia and Murshidabad—Type-study



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# Button Industry in Nadia and Murshidabad—A Type-study

## PREFACE

1. During the marginal time available after Rabi Crop Survey in 1958, the State Statistical Bureau, at the instance of the Cottage and Small-Scale Industries Department, conducted a type-study of some selected industries in a number of areas and collected, for facility of development planning, detailed information about economic condition and working of the industrial units.

2. The field-work was carried out, at no additional cost, by the Crop Survey staff of the Bureau under the able supervision of Dr. K. S. Bandyopadhyay, Deputy Director. Dr. Bandyopadhyay was in charge of compilation work also.

3. This series of reports summarise the information collected. The present volume, the first of the series, deals with mother-of-pearl button-making establishments of Nadia and Murshidabad.

4. The industry is reported to have been organised by displaced settlers from East Pakistan and appears to be pursued as a handicraft along with other occupations.

5. Manufactured from indigenous *jhinuks*, with only rudimentary tools, these buttons, the enquiry reveals, cost only Re.0.27 for every rupee-worth of goods. But because of the limited resources the units cannot work to their full capacity or produce enough buttons to give them sufficient earnings from this source.

Not unnaturally, thus, there is little overall savings for reinvestment in the industry itself.

6. Middlemen have been found to operate between the manufacturers in their cottages and wholesalers in Calcutta market. They purchase unglazed buttons, polish and sell them in Calcutta market. In this process of transfer, buttons which actually cost about Re.0.27 per gross (per rupee of

production value) sell at prices varying between Rs.1.34 to as much as Rs.2.50 per gross in Calcutta market, a sizeable portion of the ultimate profit going to middlemen.

Speaking of profits, probably because of their better standards, Nadia units, their difficulties about raw materials and organisation notwithstanding earn Rs.3.30 per rupee of production cost while for Murshidabad units, the corresponding margin—Rs.2.40 appears to be much lower.

7. Nadia and Murshidabad buttons, as far as could be gathered from Calcutta market, face very serious rivalry from cheap plastic and nylon buttons and from *jhinuk* buttons mechanically manufactured in Maheshi, an area in Bihar. Even so, the products of Nadia and Murshidabad, because of their better craftsmanship, are reported to be in demand in many quarters, in far away areas like Delhi, Bombay and Uttar Pradesh.

8. To sum up, our investigations indicate that as a cottage industry, specially as a secondary occupation, button-making should have fairly good prospects provided—

- (i) *jhinuk* can be procured locally at a cheaper rate;
- (ii) better designing can be introduced;
- (iii) polishing can be done in the cottages so that the total production cost might remain low; and
- (iv) last, but not the least, better contact with Calcutta market could be established and buttons sold at cheaper rates in the ultimate markets.

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## Button Industry in Nadia and Murshidabad—A Type-study

### Present Economic Conditions and Trends

1.1. **Introduction:** For District Development Planning, the Cottage and Small Industries Department, Government of West Bengal, felt a need for detailed information on the present economic condition of a number of cottage industries on the country-side.

1.2. Accordingly, at the instance of the Cottage and Small Industries Department, the State Statistical Bureau conducted a survey of (mother-of-pearl) button-making establishments in the districts of Nadia and Murshidabad and several other industries in different areas, during the marginal time available between April and June 1958, after normal crop survey programme.

The present report relates to the button-making establishments. Statistics collected have been subjected to detailed analysis and are presented in nine sets of tables—all by types.

2.1. **Scope of investigation:** Information was collected (as per Appendix A) regarding—

- (a) raw materials consumed,
- (b) value of products manufactured,
- (c) capital structure of the industries,
- (d) their assets and liabilities, and
- (e) difficulties faced by the industrial establishments.

3.1. **Growth of the industry:** Button-making industry, in the districts of Nadia and Murshidabad, is still in its infancy. It has been organised and is run by displaced persons from East Pakistan who migrated after 1947. Many of the settlers were engaged in button-making prior to migration. In Nadia area, they were led to start their business because of the interest taken by an entrepreneur who has now turned into a regular middleman operating between the units and Calcutta market.

4.1. **Number of units and their location:** Only fifty-three establishments have been found manufacturing buttons in the villages of Nadia and Murshidabad districts, thirteen at Milannagore (Bogula) in the Sadar subdivision of Nadia district and forty in Manindranagar colony in Cossimbazar in the district of Murshidabad. The total number being quite small, no sampling was considered necessary and a complete census was taken.

4.2. **Manufacturing process and items of manufacture:** The button-makers of Nadia and Murshidabad prepare *jhinuk* (mother-of-pearl) buttons and these are of different types, viz., "moura", "japani", "forty", "astani", etc.

4.3. Button manufacturing is carried on as a cottage handicraft with simple tools which comprise of (i) a pair of grinding stones, (ii) a wooden box with an iron handle, (iii) a few pliers, (iv) a pair of *chaks* or designing equipments, and (v) a pair of drills.

Not all the establishments manufacture complete buttons. There are, broadly speaking, two types of establishments.

First, we have 13 establishments in Nadia and 34 in Murshidabad which prepare complete buttons. They purchase *jhinuks* outright, the main raw material necessary, from a broker (in case of Nadia) or from a co-operative society (in case of Murshidabad), prepare the buttons complete with holes, raised rims

and sell them again to the same broker or the co-operative society, as the case may be, at fixed and agreed rates.

In the second group, we have 6 establishments in Murshidabad run by the poorer section of the settlers. They are supplied with half-finished buttons by the other manufacturers. They size up the buttons, bore holes in them and make them over to the manufacturers at the rate of Re.1 per twelve gross of buttons. In what follows we have called them *dadandari* type of units (establishments).

The villagers engaged in the industry cut *jhinuks*, size and shape them, bore holes and prepare raised rims of the buttons, but the final glazing and polishing are not done by them. The middlemen thus purchasing the buttons from the manufacturers glaze and polish the buttons before these are marketed at Calcutta. The co-operative society operating in Murshidabad purchases the buttons from the individual manufacturers, but the society also sells the buttons to the middlemen who do the polishing and glazing before placing these in Calcutta market.

Detailed note on the manufacturing process will be found in Appendix B.

5.1. **Principal raw materials: Sources of supply:** All the manufacturers use *jhinuk* picked up by local Santha's and Bagdis from Ghoramara *beel*—a Government *khas mahal* water-area in Murshidabad. Khas Mahal Department leases out this water-area to the highest bidder every year and the bidder engages pickers to collect *jhinuks* from this *beel*.

*Jhinuks* are at present available in plenty in the Ghoramara Beel.

It is, however, to be investigated, if this *beel* can supply *jhinuks* for long years to come. It is perhaps time, attempt was made to collect *jhinuks* from other *beels* also like Dhaparia Kalma Beel in Nakashipara police-station in the district of Nadia.

5.2. Pickets get 30 seers for every maund of *jhinuks* collected. The bidders purchase 30 seers at Rs.6 per maund. In other words, every picker gets Rs.4.50 for every maund of mother-of-pearl collected and cleaned by them. (A note on the collection of *jhinuks* prepared by the Assistant Superintendent, Berhampore, will be found at Appendix C).

5.3. The Nadia units purchase *jhinuks* from a broker at Belghoria near Calcutta, who procures them from the Ghoramara Beel.

Recently, some of the Murshidabad units have formed a co-operative society of their own, and have taken lease of the *beel* for the purpose of collecting *jhinuks* only. Both member and non-member establishments are getting their supply from this co-operative society.

5.4. The Nadia units have to incur an average cost of Rs.9.15 per maund, while the Murshidabad units have to pay only Rs.7.61 per maund, thereby effecting a saving of Rs.1.54 per maund of *jhinuks* consumed.

5.5. **Transport and collection of raw materials:** Murshidabad units, as stated above, purchase *jhinuks* from the local co-operative society. The Nadia units are not so fortunate. They obtain their supply from the broker at Belghoria, 54 miles away from their place of manufacture, and thus have to pay, as stated before, about Rs.1.54 more per maund of *jhinuks*.

5.6. Besides *jhinuks*, the units purchase some amount of lime, soda, acid, kerosene, thread balls, etc., as auxiliary raw materials for the little processing that they do for the manufacture.

**6.1. Value of raw materials consumed:** Tables 4.1 and 4.2 indicate the average quantity and value of the raw materials, fuels, etc., consumed by the manufacturing establishments.

Establishments manufacturing complete buttons consume about 17 maunds of *jhinuks* on an average per year, while the *dadandari* establishments get a supply of approximately 1,991 gross of unfinished buttons every year on an average.

**6.2.** The expenditure on raw materials, not un-naturally, constitutes the major item of the cost of production. In fact, as indicated in table 4.1, the Nadia establishments spend 87 per cent. of the total manufacturing cost and the Murshidabad independent units 70 per cent. on the purchase of raw materials.

**7.1. Manufactured products and by-products:** Unglazed and unpolished mother-of-pearl button is the principal product of the industry. The crushed residue of *jhinuks*, which can be converted into good building lime, is the only by-product. Tables 5.1 and 5.2 show the products and by-products by value and average quantity manufactured per establishment. Incidentally, the Murshidabad establishments produce by-products worth about Rs.6 per establishment per year.

**7.2. Total output and value of products:** Nadia establishments manufactured 610 gross, and Murshidabad establishment 866 gross of unglazed buttons per unit last year. The overall average comes to 795 gross per establishment.

**7.3.** The *dadandari* establishments, which worked with half-finished buttons, were supplied with (*vide* table 4.2) 1,991 gross of semi-finished buttons per unit last year for turning out finished bored buttons.

**7.4.** The average value (actual sale value) per gross of buttons comes to Rs.1.07 (*vide* table 5.2), and thus it will be seen that the independent establishments of Nadia and Murshidabad manufactured finished products worth Rs.39,872, i.e., buttons worth Rs.848 per establishment.

**7.5. Capacity:** It is found (*vide* table 5.1) that the Nadia establishments have claimed that they might produce buttons worth Rs.1,725 per year per establishment, with the tools available by drafting larger number of men to this work. Murshidabad workers, who even now spend much of their time on button-making, estimate that provided they get sufficient raw materials and other facilities, they can produce buttons worth Rs.981 per year per establishment.

**8.1. Labour position:** Tables 3.1 and 3.2 set out the details of the labour position. The most important feature here is that all the establishments, with the exception of one independent unit in Murshidabad, are run almost entirely by family labour.

**8.2.** The only establishment engaging regular outside labour pays wages at the rate of Rs.2.50 in cash and Rs.20 in kind per man-month. The wages paid in one particular instance cannot be taken to be indicative of the prevailing wage rate, and no evaluation of family labour in terms of money is, therefore, considered feasible. Besides engaging regular outside labour, some of the units got part of the manufacturing process done through other establishments on payment of contract charges which, strictly speaking, cannot be defined purely as labour charges. These charges cover both cost of labour and machinery utilised by the units doing the work.

**9.1. Expenditure incurred by the manufacturing units:** Items of expenditure incurred by a unit broadly include (a) raw materials, (b) other auxiliary materials, packing materials, fuels, labour, rent, interest and repairing charges. As already indicated, it has not been possible to evaluate labour charges.

**9.2. Expenditure of raw materials:** Leaving aside labour, the major item of expenditure relates to purchase of raw materials, which constitutes about 68 per cent. of the total cost in case of Murshidabad units and 85 per cent. in case of Nadia units (table 6.1). The difference is partly due to the fact that the Nadia units had to pay higher price for procuring the raw materials.

**9.3. Total expenditure:** Accounting for all the items of expenditure, it will be found that on an average an independent unit spends something like Rs.233 per year in manufacturing buttons (table 6.1). As against this, the *dadandari* establishments have to spend only Rs.16.16 on an average per year in running their industry.

**10.1. Cost of production:** Since an independent unit spends about Rs.233 per year in manufacturing 795 gross of buttons on an average, the cost of production per gross of buttons is of the order of Re.0.29 (i.e.,  $\text{Rs.233} \div 795 = \text{Re.0.29}$  approximately).

**10.2.** The average sale value of manufactured buttons per year is of the order of Rs.852.96. Dividing the annual expenditure per unit by the average value of production per unit, we find that the cost of production comes roughly to about Re.0.27 for every rupee worth (sale value) of products manufactured. In other words, there is a margin of about Re.0.73 per rupee worth of goods produced.

**11.1. Income:** The margin, as analysed above, would seem to be fairly satisfactory, but since the volume of output is not quite substantial, it is found that the independent units of Murshidabad have on an average an income of Rs.637 per year or Rs.53.08 per family per month from button-making, while the Nadia units can claim on this score only Rs.577 a year, that is, Rs.48.09 per family per month. Income-margin, naturally enough, is much lower (Rs.146 per year, that is, Rs.12.15 per family per month) in the case of average *dadandari* establishments (table 6.2).

**11.2.** The total net income from button-making (independent units) is quite small indeed—in fact, on an average much too slender for the maintenance of a family of 5.2 members (average size) in Murshidabad and 6.0 (on an average) in Nadia (*vide* table 8.1).

**11.3. Percentage of income from button-manufacture:** Table 8.1 will further indicate that the overall monthly income from all sources taken together is about Re.0.97 per family, and approximately half of this comes from button-making.

**11.4.** As analysed in table 8.1, in Nadia the average monthly income of the independent units per establishment is Rs.111 and that in Murshidabad Rs.96. In other words, Nadia button-makers earn more from other pursuits.

**11.5.** Table 8.2 will indicate that 62 per cent. of the families in Murshidabad derive 50 per cent. or more of their income from button-making, while in Nadia, 46 per cent. could earn as much by button-making. Evidently, then, the industry nowhere accounts for the sole occupation of a family. It is pursued as a handicraft along with other occupations, e.g., agriculture.

**12.1. Marketing of products:** *Dadandari* establishments, as pointed out in paragraph 4.4 above, operate merely as wage labourers and they make over the finished products to the units operating as *dadandars*, who supply them unfinished products. They have thus no marketing problem and have not, therefore, expressed much of a concern about this aspect of the matter.

**12.2. Independent establishment:** The establishments in Nadia, it will be recalled, sell their finished products at a price of Rs.1.22 per gross, on an average, to the broker from whom they purchase raw materials.

**12.3.** The Murshidabad units sell their products at a price of Rs.1.02 per gross to the co-operative society which finally sells them to the wholesalers at Calcutta at a slightly higher rate.

**12.4.** Enquiries at Calcutta market reveal that finished and glazed buttons fetch prices varying between Rs.16 and Rs.30 per 12 gross. In other words, even making allowances for glazing costs, the broker or the middleman in Calcutta appears to take away an appreciable portion of the profit. It is no wonder that the establishments are in such a bad way.

**12.5.** *Jhinuk* buttons from Murshidabad and Nadia have their main market in Calcutta. The buttons are reported to be in demand in U.P., Delhi and Bombay as well.

Enquiries at Calcutta market indicate that the mother-of-pearl buttons from Murshidabad and Nadia face their strongest rivals in (a) plastic buttons, (b) latest nylon buttons and (c) *jhinuk* machine-made buttons from Maheshi in Bihar. *Jhinuk* buttons account for only some 10 per cent. of the total trade in button industry.

*Jhinuk* buttons for coats have practically been replaced by plastic and nylon buttons, and now *jhinuk* buttons are used for shirts and *punjabis* chiefly.

**12.6.** Maheshi buttons have poorer finishing and have only two holes, not four, usual in Nadia and Murshidabad buttons and are popular only among non-Bengali labourers. They are also cheaper and sell at Rs.6 per 12 gross.

On the other hand, plastic buttons, with their better finishing, better look, cost only Rs.2 to Rs.3.50 for a bundle of 12 gross and are much cheaper than the *jhinuk* buttons.

**12.7. Future prospects:** Any way, the *jhinuk* buttons of Murshidabad and Nadia have some respectability and are in demand in fashionable quarters, and there is, therefore, even now a scope for larger consumption of these buttons, provided designs could be improved upon and supply made more regular.

Better marketing facilities, that is, some sort of direct contact between the manufacturers and Calcutta market, and facilities for glazing and finishing of buttons at the place of production would mean definitely lower cost and consequently lower selling price in the market and would thus ensure a better future for the industry.

**13.1. Capital structure, assets and liability position:** Table 1.1 and the three tables following give an idea of the capital structure of the industrial units. It will be seen that the total productive capital employed in the button industry in the two districts is Rs.7,678, of which Rs.2,492 come under 'fixed capital' category. It will also be seen that the independent establishments in Murshidabad which function, on their own, employ about five times the capital invested in *dadandari* units.

It will further be noticed that for every rupee spent on working capital, there has been an investment of Rs.3.80 per unit in fixed capital in the case of *dadandari* units in Murshidabad. Nadia units spend more on purchase of raw materials and this perhaps accounts partly for the larger working capital in comparison with that of the Murshidabad establishments.

**13.2. Assets:** Table 1.2 shows the analysis of the asset position in greater details. The total value of assets per establishment comes to Rs.145, half of which is held in cash. Assets for *dadandari* establishments are almost insignificant, only Rs.28 per unit.

**13.3.** Table 1.3 indicates the distribution of establishments according to the value of assets. As might be expected in the case of this type of subsidiary cottage industries, 96 per cent. of the establishments come under the lowest asset group.

**14.1. Liabilities: Dadandari unit:** Position regarding liabilities is analysed in table 2.1. The *dadandari* units, as already explained, function as merely paid labourers, and, therefore, they have no liability whatsoever on account of their manufacturing work.

**14.2. Independent unit:** It is encouraging to note that only 9 of the 47 independent units have some sort of liability on account of button-making. As for the 7 establishments in Nadia, their main liability is on account of the money they borrowed from Government for purchase of raw materials. On this score, this liability is of the order of Rs.286 on an average.

**15.1. Credit facilities:** Table 2.2 throws light on the credit facilities enjoyed and the amount of borrowings. It is indeed encouraging to note that none of the units appears to have borrowed anything from private money-lenders. Cent per cent. of the credit was supplied by the State in Nadia and by the co-operative society in Murshidabad.

**16.1. Difficulties faced by the establishments and suggestion for improvements:** The major difficulties appear to be four:—

- (a) difficulties on account of supply of raw materials,
- (b) difficulties in marketing the products,
- (c) lack of adequate cash capital, and
- (d) last, but not the least, competition from machine-made plastic buttons and foreign goods.

**16.2. Supply of raw materials:** Nadia establishments have to depend on the broker for raw materials, and thus, for 92 per cent. of the establishments, collection of raw materials is one of the major difficulties.

A solution for this would perhaps lie in establishing a direct contact between the Nadia units or their co-operatives and the co-operative lessee of the Ghoramara Beel at Murshidabad. This would considerably reduce expenditure on raw materials. Probably, the co-operative societies might also arrange to take lease of other water areas in Nadia or in the neighbourhood for collection of mother-of-pearl.

Thirty-two per cent. of Murshidabad units speak of difficulties on account of raw materials. This apparently relates to the case of units which are not members of the co-operative society—the lessee of the *beel*.

**16.3. Marketing difficulties:** Quite a large percentage of establishments in Nadia experienced difficulty in marketing the manufactured products. They sell to middlemen who glaze the buttons and, therefore, as already indicated, sell the finished products at an appreciable margin of profit. A solution in this regard as suggested by the manufacturers themselves might lie in elimination of the middlemen as well as in better and direct contact with Calcutta market. For Murshidabad units, the co-operative society might easily replace the middlemen between them and Calcutta market.

The merchants in Calcutta have deplored the irregularity in supply of Nadia and Murshidabad buttons. On the other hand, the units themselves feel that they could produce much more, if they had enough funds and sufficient raw materials. Hence, provision for more working capital in the shape of Government loan, co-operative loan or otherwise might bring about larger production, reduction of cost and regular supply to the market. Incidentally, although the units have started with Government loans, some provision for future credit facilities would also be necessary.

**16.4. Competitions:** As already pointed out, plastic buttons and Maheshi buttons are the rivals of Nadia and Murshidabad buttons, and this competition is the major problem facing the industry. The competition could perhaps be reduced, if, as already explained in paragraph 16.3 above, the manufacturers could establish direct contact with Calcutta wholesalers and were provided with other facilities to market the products at a cheaper rate.

Glazing and finishing at the manufacturing centre itself might also mean cheaper selling price; in fact, Murshidabad manufacturers might easily get the glazing and polishing done through the six establishments engaged in boring holes and sizing buttons prepared by them. This would be a definite improvement and would increase the margin of profit for the manufacturers and reducing possibly, at the same time, the market price in Calcutta.

**16.5. Economic condition:** To sum up, the economic condition of this cottage industry does not appear to be very unsatisfactory. The margin of profit for the manufacturers per unit of production is not at all bad, and it could definitely be improved, if they did themselves the final processing also.

Difficulties about raw materials indicate the necessity for finding out and exploiting other sources of supply of *jhimuks*.

To sum up, conditions could improve—

- (a) if the products could be placed in the Calcutta market directly,
- (b) if mother-of-pearl could be procured from the local *beel* areas regularly and at a cheaper price, and
- (c) if the manufacturers could themselves do the glazing and polishing and could introduce better designing and finishing.

#### Notes on statistical tables

As already stated, schedules in respect of 53 establishments were accepted for analysis. It has been observed during the survey that establishments engaged in the production of buttons on a small scale are, as already pointed out, mainly of two types, namely, (1) establishments that purchase raw materials and sell finished products independently, and (2) establishments that receive raw materials from *dadandars* and supply finished products to the *dadandars* against what may be called wages. The former has been termed as an independent unit, while the latter, a *dadandari* one. The two types have been separately shown in the tables as the two are fundamentally different.

The statistical tables prepared in this regard are discussed below:

**Table 1.1. Average value of fixed and working capital employed by establishments:** This table read with the next three tables will give an idea of the capital structure of the industry under discussion as on the date of enquiry. The table shows that the total productive capital employed by the button industry in the two districts is Rs.7,678, roughly a third of which, i.e., Rs.2,492, comes under fixed capital. In Murshidabad, where both the types of

the industry are found, the total productive capital employed by the independent establishment is, on an average, about five times the amount invested in the *dadandari* system. It may be seen that for every rupee of working capital of a *dadandari* establishment, there has been an investment of Rs.3.8 in fixed capital in Murshidabad.

**Table 1.2. Details of assets of establishments:** This table will give an idea of the average value of different types of assets. The total value of assets per establishment in this industry is about Rs.145. Roughly, half this amount is required in cash, and out of the other half, a sum of Rs. 21 is invested in land and buildings and about an equal amount in machineries and tools. Cash in the case of Nadia establishments has come out to be large because of loans taken by some of the establishments from State on a date not very remote from the date of enquiry.

**Table 1.3. Distribution of establishments according to value of assets:** This table gives the distribution of establishments according to value of assets into three groups viz., up to Rs.500, Rs.501-1,000 and Rs.1,001-2,000.

None of the 53 establishments engaged in this industry has assets exceeding Rs.2,000 in value. In fact, 96 per cent. of the establishments fall under the lowest asset-group, i.e., up to Rs.500. There are only two independent establishments, one in Nadia and the other in Murshidabad, that have invested more than Rs.500 in assets.

**Table 1.4. Manner of acquisition of machineries and tools:** This table furnishes information on the manner of acquisition of machineries and tools. Additional information has been given in respect of "any machineries and tools" purchased during the year (twelve months) preceding the date of enquiry, i.e., the year 1957-58 corresponding to the Bengali calendar year of 1364-65 B.S.

All the *dadandari* establishments of Murshidabad work with their own machines and tools, the average value of which is about Rs.11. Eighty-eight per cent. of independent establishments use their own machines and tools. The remaining 12 per cent. of establishments partly purchase machines and tools and partly take help of them from other sources. Only 23 per cent. of the establishments in Nadia have their own machines and tools worth about Rs.9 on the average, whereas the remaining establishments purchased some machines and tools and took help of the rest from different sources.

A list showing the various types of machineries, tools and accessories used in the industry appears at Appendix D.

**Table 2.1. Liabilities of establishments:** The next three tables in this series relate to finance and credit. Of these, table 2.1 furnishes information on the liabilities of establishments engaged in the industry. The *dadandari* establishments of Murshidabad have no liability whatsoever. The independent units have no liabilities on account of fixed assets. No unit in Murshidabad has any liability on account of raw materials though raw materials is the only item for which some 54 per cent. of the establishments in Nadia have liability of roughly about Rs.286 on an average.

**Table 2.2. Sources of credit:** This table is on the source of liabilities. In Nadia, 100 per cent. of the total credit were supplied by State, the rate of interest being 3 per cent. per annum. No interest was charged for loans advanced by the co-operative society in Murshidabad, according to statements received.

**Table 2.3. Additional capital required for improvement:** This table summarises the information on the requirement of additional capital on various accounts.

A third of the *dadandari* establishments feels the necessity for more machines and tools. The amount needed for this purpose is Rs.125 on an average. Necessity for improvement on any other head is not so urgently felt by them. The independent establishments of Murshidabad, however, would need monetary help on all heads. More than half of these establishments would require capital for raw materials. All establishments of Nadia feel the necessity for additional cash capital for purchasing machineries and tools as well as raw materials. The former will involve an average amount of Rs.48 per establishment and the latter roughly about Rs.200 for the purpose. The need for warehouses is also felt by establishments of this place according to reports received.

**Table 3.1. Average number of man-months worked per establishment:** This table furnishes information on the labour employed. Nearly all the establishments are solely run by family labour. Labour has been hired only by one independent establishment of Murshidabad. Compared to family labour, its contribution has been negligible.

**Table 3.2. Average annual wages paid per establishment:** This table gives an idea of wages paid to hired labour. Average wages including cash receipts and receipts in kind earned by hired labour have been worked out on the basis of the actual number of man-months worked in the industry.

**Table 4.1. Average value of consumption of raw materials, fuels, etc., per establishment:** This table furnishes details of cost of production on consumption of raw materials, fuels, etc. Cost incurred on annual repairing and for work done through others are also indicated in this table. In the case of Nadia, it is found that raw materials alone constitute on an average about 87 per cent. of the total cost. In the case of Murshidabad, the corresponding percentage is about 70. It may further be seen that electricity is not consumed by any of these establishments.

**Table 4.2. Average quantity and value of principal basic materials consumed by establishments:** This table is supplementary to table 4.1 where values of raw materials consumed have been furnished. In this table is given an indication of the quantity and value of two principal basic materials consumed by the industry. The basic materials chosen are *jhinuk* (mother-of-pearl) and "button without bores". The former is consumed by the independent establishments, while the latter by the *dadandari* units. The overall consumption in an independent establishment is about 17 maunds of *jhinuk* on an average, whereas a *dadandari* establishment consumes an average quantity of 1,991 gross of unfinished buttons.

The names of raw materials used in the industry are enlisted at Appendix D.

**Table 5.1. Average value of products, by-products and work done by establishments:** This table will give an idea of the value of production. The average value of products made by the independent establishments of the industry is Rs.848. The independent establishments of Murshidabad have produced by-products worth about Rs.6 on an average. The average capacity of production per establishment has been calculated at Rs.981 for Murshidabad, Rs.1,725 for Nadia and Rs.1,187 for the two districts averaged together. While 90 per cent. of the capacity have been utilised in Murshidabad, the percentage is as low as 43 in the case of Nadia.

**Table 5.2. Average quantity and value of principal products manufactured by establishments:** This table is supplementary to table 5.1. The average quantity produced by the independent establishments is about 866 gross in Murshidabad, and 610 gross in Nadia making an overall average of 795 gross. The *dadandari* establishments consume about 1,991 gross of semi-finished buttons on the average.

**Table 6.1. Analysis of cost of production:** This table gives a complete picture of the cost of production for the industry. Taking all cost items into consideration, it is found that the average cost of production is of the order of Rs.233.

**Table 6.2. Cost of production expressed in terms of value of production:** The present table is almost similar in structure to table 6.1. Cost of production in this table has been expressed as a fraction of the value of production. The total cost is Re.0.27 per rupee value of production. The independent establishments of Murshidabad have earned a gross income of Rs.637 per establishment after allowing for the cost of production. The corresponding figure for Nadia is lower. The actual margin in their cases comes to Rs.577. The margin is the least in the case of *dadandari* establishments. This is quite likely as these establishments solely work on materials supplied by *dadandars*. In their cases, the amount shown represents virtually the wages received for work done. The income from this source is about Rs.146 annually. It will be seen from table 8.2 that these families derive most of their income from other sources.

**Table 7.1. Sources of supply of principal raw materials:** The sources of supply of the raw materials have been furnished in this table.

In Nadia, purchase of raw materials is made from *mahajan* (broker). The establishments of Murshidabad purchase raw materials from the local co-operative society.

**Table 7.2. Cash and credit purchase of raw materials:** The terms of purchase of raw materials as made by the establishments have been shown in this table.

It will be noticed that payment for purchase of raw materials has been made invariably in cash, leaving no room for credit purchase.

**Table 7.3. Agency for sale of finished products:** This table furnishes information relating to the sale of finished goods through different agencies for sale.

As the *dadandari* establishments will not come in this picture the figures for sale in this table relate to the independent establishments only. The button industry earns about Rs.873 on an average per unit annually from the sale of finished goods. In Murshidabad, sales have been effected through the local co-operative society while in Nadia sales have been made through a *mahajan* (broker).

**Table 8.1. Size and family income by sources:** The overall average size of the family, it will be seen, is roughly 5. The overall monthly income of a family is about Rs.97 on the average. Roughly, half the income is derived from the industry. Except in the case of *dadandari* establishments, the main source of income is the industry itself. The establishments of Nadia derive a good income from agriculture.

**Table 8.2. Percentage of families deriving 50 per cent. or more income from different sources:** This table is supplementary to table 8.1. Only those families that derive 50 per cent. or more of the income from any particular source have been presented in this table. Instead of the actual number of such families, their percentages to the total number have been indicated. It is to be noted that the percentage figures may not add up to 100 as there might be certain families which do not derive 50 per cent. of the total income from any particular source.

**Table 8.3. Land for cultivation:** This table furnishes information on the average area of land which is owned or possessed per family.

It may be noted that total land under possession as shown in column (5) has been taken to be equal to the sum of the total acres owned by the family and the total acres let in minus total acres let out.

**Table 8.4. Family expenditure:** This table gives details of the percentage expenditure on the major heads of consumption, namely (1) food, (2) clothing, (3) fuel and light, (4) rent, and (5) miscellaneous.

**Table 9.1. Difficulties encountered by establishments:** This table is based on the experience of the establishments as regards the difficulties encountered by them on various accounts. It may be noted that the independent establishments of Nadia work for a *mahajan* (broker) and sell their products to him. As such their remuneration has been low. Collection of raw materials is a problem to 92 per cent. of these establishments, whereas the corresponding figure for Murshidabad is only 32 indicating that raw materials

are more easily available to the establishments in Murshidabad than in Nadia. Marketing of finished products is also comparatively difficult in Nadia.

**9.2. Willingness to join co-operative societies:** Information has been furnished in this table showing if the establishments have any willingness to join any form of co-operative society.

N. B. GANGULY,  
*Statistician.*

K. S. BANDYOPADHYAY,  
*Deputy Director.*

*The 2nd February, 1959.*

## CAPITAL STRUCTURE

Table 1.1—Average value of fixed and working capital employed by establishments.

Name of subdivision.	Type of industry.	Number of establishments.	Productive capital employed (Rs.)						Ratio of fixed capital to working capital.	
			Fixed capital.		Working capital		Total productive capital			
			Total.	Average.	Total.	Average.	Total.	Average.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
Murshidabad										
Sadar	..	Independent ..	34	1,885.45	55.45	2,672.25	78.60	4,557.70	134.05	0.71
		Dadandari ..	6	133.00	22.17	35.00	5.83	168.00	28.00	3.80
		Sub-total ..	40	2,018.45	50.46	2,707.25	67.68	4,725.70	118.14	0.75
Nadia										
Ranaghat	..	Independent ..	13	473.43	36.42	2,479.00	190.69	2,952.43	227.11	0.19
		Sub-total ..	13	473.43	36.42	2,479.00	190.69	2,952.43	227.11	0.19
		Grand total ..	53	2,491.88	47.02	5,186.25	97.85	7,678.13	144.87	0.48

Table 1.2—Details of assets of establishments

Name of subdivision.	Type of industry.	Number of establishments.	Average value per establishment.					
			Value of fixed assets (Rs.)				Value of stocks (Rs.)	
			Land and buildings.	Machineries.	Tools.	Furniture etc.	Raw materials.	Semifinished products.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>Murshidabad</b>								
Sadar	Independent	34	21.53	7.94	19.97	6.01	8.43	7.90
	Dadandari	6	7.00	1.50	9.75	3.92	1.17	1.00
	Sub-total	40	19.35	6.97	18.44	5.70	7.34	6.86
<b>Nadia</b>								
Ranaghat	Independent	13	25.23	3.77	6.19	1.23	0.77	3.92
	Sub-total	13	25.23	3.77	6.19	1.23	0.77	3.92
	Grand total	53	20.79	6.19	15.44	4.60	5.73	6.14

Name of subdivision.	Type of industry.	Number of establish- ments,	Average value per establishment.				
			Value of stocks (Rs.)		Amount due for supply of finished product (Rs.)	Advance made for supply of materials etc. (Rs.)	Total assets (Rs.)
			Finished products.	Cash (Rs.)			
(1)	(2)	(3)	(10)	(11)	(12)	(13)	(14)
<b>Murshidabad</b>							
Sadar ..	Independent ..	34	8.62	44.70	6.01	2.94	134.05
	Dadandari ..	6	0.50	3.16			28.00
	Sub-total ..	40	7.40	38.47	5.11	2.50	118.14
<b>Nadia</b>							
Ranaghat	Independent ..	13	..	181.38	..	4.62	227.11
	Sub-total ..	13	..	181.38	..	4.62	227.11
	Grand total ..	53	5.58	73.52	3.86	3.02	144.87

Table 1-3—Distribution of establishments according to value of assets

Name of subdivision.	Type of industry.	Number of establishments.	Establishments having total value of assets.					
			Up to Rs. 500		Rs. 501—Rs. 1,000		Rs. 1,001—Rs. 2,000	
			Number.	P.C.	Number.	P.C.	Number.	P.C.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>Murshidabad</b>								
Sadar ..	Independent ..	34	33	97	..	..	1	3
	Dadandari ..	6	6	100	..	..	..	..
	Sub-total ..	40	39	98	..	..	1	2
<b>Nadia</b>								
Ranaghat ..	Independent ..	13	12	92	1	8	..	..
	Sub-total ..	13	12	92	1	8	..	..
	Grand total ..	53	51	96	1	2	1	2

Table 1-4—Manner of acquisition of machineries and tools

Name of subdivision.	Type of industry.	Number of establishments.	Establishments working with machineries and tools.					
			Purchased		Hired		Received from Dadandar	
			P.C.	Average value (Rs.)	P.C.	Average rent (Rs.)	Bengali P.C.	Non-Bengali P.C.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>Murshidabad</b>								
Sadar ..	Independent ..	34	88	20·22	..	..	..	..
	Dadandari ..	6	100	11·25	..	..	..	..
	Sub-total ..	40	90	26·22	..	..	..	..
<b>Nadia</b>								
Ranaghat ..	Independent ..	13	23	9·31	..	..	..	..
	Sub-total ..	13	23	9·31	..	..	..	..
	Grand total ..	53	73	24·92	..	..	..	..

Name of subdivision.		Type of industry.	Number of establishments.	Establishments working with machineries and tools			Machineries and tools purchased last year.	
				Taken as help. P.C.	Purchased and taken as help P. C.	Received from other sources P.C.	Number of establishments.	Average value. (Rs.)
(1)	(2)	(3)	(10)	(11)	(12)	(13)	(14)	
Murshidabad								
Sadar ..	..	Independent ..	34	..	12	..	21	9.61
		Dadandar ..	6	..	..	..	..	....
		Sub-total ..	40	..	10	..	21	9.61
Nadia								
Ranaghat	..	Independent ..	13	15	54	8	9	1.95
		Sub-total ..	13	15	54	8	9	1.95
		Grand total ..	53	4	21	2	30	7.31



## FINNAGE AND CREDIT

Table 2-1—Liabilities of establishments

Name of subdivision.	Type of industry.	Number of establishments.	Establishments having liabilities.		Average value (Rs) of liabilities per establishment having liabilities for				
			Number.	Percentage	Land and buildings.	Machinery and tools.	Raw materials.	Others.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>Murshidabad</b>									
Sadar ..	Independent ..	34	2	5.88	..	..	..	150.00	150.00
	Dadandari ..	6	..	..	..	..	..	..	..
	Sub-total ..	40	2	5.00	..	..	..	150.00	150.00
<b>Nadia</b>									
Ranaghat ..	Independent ..	13	7	53.85	..	..	285.71	..	285.71
	Sub-total ..	13	7	53.85	..	..	285.71	..	285.71
	Grand total ..	53	9	16.98	..	..	222.22	33.33	255.55

Table 2-2—Sources of credits

				Sources of credit.			
Name of subdivision.	Type of industry.	No. of establishments having liabilities.	Average liability per establishment having liability (Rs.)	Bank.		Co-operative society.	
				P. C. of total credit.	Rate of interest per cent. per annum.	P. C. of total credit.	Rate of interest per cent. per annum.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Murshidabad</b>							
Sadar	Independent		150.00			100	
	Dadandari						
	Sub-total		150.00			100	
<b>Nadia</b>							
Ranaghat	Independent		285.71				
	Sub-total		285.71				
	Grand total		255.55			13	

Sources of credit.								
Name of subdivision.	Type of industry.	No. of establishments having liabilities.	Private money—lender.		State.		Others.	
			P.C. of total credit.	Rate of interest per cent. per annum.	P.C. of total credit.	Rate of interest per cent. per annum.	P.C. of total credit.	Rate of interest per cent. per annum.
(1)	(2)	(3)	(9)	(10)	(11)	(12)	(13)	(14)
<b>Murshidabad</b>								
Sadar .. ..	Independent							
	Dadandari							
	Sub-total							
<b>Nadia</b>								
Ranaghat ..	Independent				100	3.00		
	Sub-total				100	3.00		
	Grand total				87	3.00		

\*Loan taken without interest.

Table 2-3—Additional capital required for improvement

Name of subdivision.	Type of industry.	No. of establishments.	Establishments requiring additional capital for			
			Land and buildings.		Machineries and tools.	
			P.C.	Average amount. (Rs.)	P.C.	Average amount. (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Murshidabad</b>						
Sadar ..	Independent ..	34	3	250.00	3	50.00
	Dadandari ..	6	..	..	33	125.00
	Sub-total ..	40	2	250.00	8	100.00
<b>Nadia</b>						
Ranaghat ..	Independent ..	13	8	100.00	100	48.08
	Sub total ..	13	8	100.00	100	48.08
	Grand total ..	53	4	175.00	30	57.81

Name of subdivision.	Type of industry.	No. of establishments.	Establishments requiring additional capital for					
			Raw materials.		Raw materials and machineries etc.		All combined.	
			P.C.	Average amount. (Rs.)	P.C.	Average amount. (Rs.)	P.C.	Average amount. (Rs.)
(1)	(2)	(3)	(8)	(9)	(10)	(11)	(12)	(13)
<b>Murshidabad</b>								
Sadar ..	Independent ..	34	53	355.56	32	486.36	94	385.94
	Dadandari ..	6	..	..	..	..	33	125.00
	Sub-total ..	40	45	355.56	28	486.36	85	370.59
<b>Nadia</b>								
Ranaghat ..	Independent ..	13	100	201.92	..	..	100	440.38
	Sub-total ..	13	100	201.92	..	..	100	440.38
	Grand total ..	53	58	291.13	21	486.36	89	389.89

## LABOUR AND WAGES

Table 3-1—Average number of man-months worked per establishment

Name of subdivision.	Type of industry	No. of establishments	Average No. of man-months worked in the year per establishment.	Average number of man-months worked in the year per establishment		Average labour per establishment.	Percentage of establishment run solely by family labour.
				Family labour	Hired labour		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Murshidabad</b>							
Sadar	Independent	34	21.09	20.74	0.35	2.85	97
	Dadandari ..	6	8.83	8.83	..	1.00	100
	Sub-total ..	40	19.25	18.95	0.30	2.58	97
<b>Nadia</b>							
Rahaghat	Independent ..	13	12.69	12.69	..	2.46	100
	Sub-total ..	13	12.69	12.69	..	2.46	100
	Grand total ..	53	17.64	17.41	0.23	2.55	98

Table 3-2—Average annual wages paid per establishment

Name of subdivision.	Type of industry.	No. of establishments.	Average man-months worked by			Wages per man-month paid to hired labour in			Average annual wages paid per establishment in		
			Family labour.	Hired labour.	Total.	Cash.	Kind.	Total.	Cash.	Kind.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<b>Murshidabad</b>											
Sadar ..	Independent ..	34	20.74	0.35	21.09	2.50	20.00	22.50	0.88	7.06	7.94
	Dadandari ..	6	8.83	..	8.83	..	..	..	..	..	..
	Sub-total ..	40	18.95	0.30	19.25	2.50	20.00	22.50	0.75	6.00	6.75
<b>Nadia</b>											
Ranaghat	Independent ..	13	12.69	..	12.69	..	..	..	..	..	..
	Sub-total ..	13	12.69	..	12.69	..	..	..	..	..	..
	Grand total ..	53	17.41	0.23	17.64	2.50	20.00	22.50	0.57	4.53	5.10

## RAW MATERIALS, FUELS, ETC.

Table 4-1—Average value of consumption of raw materials, fuels, etc., per establishment

Name of subdivision.	Type of industry.	No of establishments.	Average value (Rs.) of annual consumption per establishment of							Total.
			Raw materials.	Fuels	Electricity.	Lubricants.	Packing materials.	Repairing charges.	Work done through others.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<b>Murshidabad</b>										
Sadar ..	.. Independent ..	34	175.45	11.32	..	0.49	5.71	3.57	52.63	240.17
<b>Nadia</b>										
Ranaghat ..	.. Independent ..	13	142.26	15.77	..	..	..	..	5.46	163.49
	Total ..	47	166.27	12.55	..	0.35	4.13	2.59	39.58	225.47
<b>Murshidabad</b>										
Sadar ..	.. Dadandari ..		12.33*	1.33	..	..	..	2.50	..	16.16

\*Excludes the value of raw materials supplied by dadandara.

Table 4-2—Average quantity and value of principal basic materials consumed by establishments

Name of subdivision.	Type of industry.	No. of establishments.	Principal basic materials.					
			Mother-of-pearl.			Buttons without bores.		
			Unit.	Average quantity.	Average value.	Unit.	Average quantity.	Average value.
				Mds.	(Rs.)			(Rs.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>Murshidabad</b>								
Sadar ..	.. Independent ..	34	Mds.	19.20	146.06	..	..	..
<b>Nadia</b>								
Ranaghat ..	.. Independent ..	13	Mds.	12.50	114.38	..	..	..
	Total ..	47		17.35	137.30	..	..	..
<b>Murshidabad</b>								
Sadar ..	.. Dadandari ..	6	..	..	..	Gross	1,990.67	..*

\*Supplied by dadandara, as such value not known.

## FINISHED PRODUCTS

Table 5.1—Average value of products, by-products and work done by establishments

Name of subdivision.	Type of industry.	No. of establishments.	Average capacity of production per establishment.	Average value (Rs.) of products and work done per establishment.					Percentage of capacity utilised.
				Products.	By-products.	Work done for others.	Total.		
(1)	(2)	(3)	(Rs.) (4)	(5)	(6)	(7)	(8)	(9)	
Murshidabad									
Sadar ..	Independent ..	34	981	887.74	6.38	..	894.12	90	
Nadia									
Ranaghat ..	Independent ..	13	1,725	745.31	..	..	745.31	43	
	Total ..	47	1,187	848.34	4.62	..	852.96	71	
Murshidabad									
Sadar ..	Dadandari ..	6	..	..	..	162.00	162.00	..	

Table 5.2—Average quantity and value of principal products manufactured by establishments

Name of subdivision.		Type of industry.	No. of estab- lishments.	Principal finished products—Button.		
				Unit.	Average quantity.	Average value. (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)	
Murshidabad						
Sadar	.. ..	.. Independent	.. 34	Gross ..	866.32 887.74	
Nadia						
Ranaghat	.. ..	.. Independent	.. 13	Gross ..	610.08 745.31	
Total			.. 47	Gross ..	795.45 848.34	
Murshidabad						
Sadar	.. ..	.. Dadandari	.. 6	Gross ..	1,990.67*	

\*Value not known.

## COST OF PRODUCTION

Table 6.1—Analysis of cost of production

Name of subdivision	Type of industry.	No. of establishments.	Average No. of man-months worked by.		Average annual cost per establishment on account of							Total
			Family labour.	Hired labour.	Hired labour.	Work done through others.	Raw materials.	Packing materials.	Fuel etc.	Rent and repairs.	Interest.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<b>Murshidabad</b>												
Sadar	Independent	34	20.74	0.35	7.94	52.63	175.45	5.71	11.81	3.57	..	257.11
<b>Nadia</b>												
Ranaghat	Independent	13	12.60	..	..	5.46	142.26	..	15.77	0.10	4.62	168.21
Total		47	18.51	0.26	5.74	39.58	166.27	4.13	12.01	2.61	1.28	232.52
<b>Murshidabad</b>												
Sadar	Dadandari	6	8.83	..	..	..	12.33	..	1.38	2.50	..	16.16

Table 6.2—Cost of production expressed in terms of value of production.

Name of subdivision.	Type of industry.	No. of establishments.	Average value of production and work done.	Average cost of production and work done.	Cost per rupee of production for—							Total.
					Hired labour.	Work done through others.	Raw materials.	Packing materials.	Fuels, etc.	Rent and repairs.	Interest.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<b>Murshidabad</b>												
Sadar	Independent	34	894.12	257.11	0.01	0.06	0.20	0.01	0.01	0.00	..	0.29
<b>Nadia</b>												
Ranaghat	Independent	13	745.31	168.21	..	0.01	0.19	..	0.02	0.00	0.01	0.23
Total		47	852.00	232.52	0.01	0.05	0.10	0.00	0.02	0.00	0.00	0.27
<b>Murshidabad</b>												
Sadar	Dadandari	6	162.00	16.16	..	..	..	..	..	..	..	..

## MARKETING

Table 7.1— Sources of supply of principal raw materials

Name : Mother-of-pearl

Name of subdivision.	Type of industry	No. of establishments.	Principal raw materials consumed during the year.		Sources of supply of principal raw materials (per cent.).					
			Unit.	Qty.	Market.		Co-operative.	Mahajan (broker).	Dadandar (Bengali).	Dadandar (Non-Bengali).
					Local.	Outside.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<b>Murshidabad</b>										
Sadar .. ..	Independent	34	Mds.	10.20			100.00			
<b>Nadia</b>										
Ranaghat	Independent	13	Mds.	12.50				100.00		
	Total ..	47	Mds.	17.35			80.00		10.04	

Table 7.2—Cash and credit purchase of raw materials

Name of subdivision.	Type of industry.	No. of establishment.	Average (Rs.) value of raw materials consumed per establishment.			
			Total.	Cash purchase.	Credit purchase.	P. C. of credit to total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Murshidabad</b>						
Sadar ..	Independent	34	175.45	175.45		
<b>Nadia</b>						
Ranaghat	Independent	13	142.26	142.26		
	Total	47	166.27	166.27		
<b>Murshidabad</b>						
Sadar	Dadandari ..		12.33	12.33		

Table 7.3—Agency for sale of finished products

Name of subdivision.	Type of industry.	No. of establishments.	Average value of annual sales per establishment. (Rs.)	Percentage of sale through.					
				Own wholesale.	Own retail.	Dadandar (Bengali)	Dadandar (Non-Bengali).	Co-operative.	Mahajan (Broker).
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>Murshidabad</b>									
Sadar .. ..	Independent ..	34	903.91					100.00	
<b>Nadia</b>									
Ranaghat ..	Independent ..	13	791.77						100.00
	Total ..	47	872.89					74.91	25.09

## GENERAL ECONOMIC CONDITION OF FAMILIES

Table 8.1—Size and family income by sources

Name of subdivision.	Type of industry.	No. of families.	Average size of family.	Average monthly income derived from (Rs.).						
				Agriculture.	Industry.	Trade.	Profession.	Other sources.	Total.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
Murshidabad										
Sadar	Independent	..	34	5.2	5.01	53.08	0.88	1.53	35.69	96.19
	Dadandari	..	6	4.5	0.49	12.15	..	5.00	48.92	66.56
	Sub-total	..	40	5.1	4.33	46.94	0.75	2.05	37.68	91.75
Nadia										
Ranaghat	Independent	..	13	6.0	38.24	48.09	2.31	3.15	19.44	111.23
	Sub-total	..	13	6.0	38.24	48.09	2.31	3.15	19.44	111.23
	Grand total	..	53	5.3	12.65	47.23	1.13	2.32	33.20	96.53

Table 8.2—Percentage of families deriving 50 per cent. or more income from different sources

subdivision.	Type of industry.	No. of families.	Percentage of families deriving 50 per cent or more income from				
			Agriculture.	Industry.	Trade.	Profession.	Other sources.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Murshidabad</b>							
Sadar	Independent	34		62			29
	Dadandari	6					100
	Sub-total	40	..	52	..	..	40
<b>Nadia</b>							
Ranaghat	Independent	13	8	46	..	..	8
	Sub-total	13	8	46	..	..	8
	Grand total			51			32

Table 8.3—Land for cultivation

Name of subdivision.	Type of industry.	No. of families.	Average area of land per family (in acres).		Families having no land for cultivation.		Families having land for cultivation.		Average area of cultivated land per family having land for cultivation (in acres).
			Owned.	Possessed.	No.	Per cent.	No.	Per cent.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Murshidabad									
Sadar ..	Independent ..	34	0.05	0.13	28	82	6	18	0.75
	Dadandari ..	6	..	0.06	5	83	1	17	0.33
	Sub-total ..	40	0.05	0.12	33	82	7	18	0.69
Nadia									
Ranaghat ..	Independent ..	13	1.66	2.60	1	8	12	92	2.82
	Sub-total ..	13	1.66	2.60	1	8	12	92	2.82
	Grand total ..	53	0.44	0.73	34	64	19	36	2.04



Table 8-4—Family expenditure

Name of subdivision.	Type of industry.	No. of families.	Percentage of total expenditure on						
			Food.	Clothing.	Fuel and light.	Rent.	Miscellaneous.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		
<b>Murshidabad</b>									
Sadar	..	Independent	..	34	70.19	4.81	3.68	0.36	20.06
		Dandandari	..	6	78.08	3.93	4.23	0.31	13.45
		Sub-total	..	40	71.11	4.70	3.74	0.35	20.10
<b>Nadia</b>									
Itanaghat	..	Independent	..	13	58.87	5.95	1.14	0.17	33.87
		Sub-total	..	13	58.87	5.95	1.14	0.17	33.87
		Grand total	..	53	67.53	5.07	2.98	0.30	24.12

## DIFFICULTIES AND OTHER MISCELLANEOUS INFORMATION

Table 9-1—Difficulties encountered by establishments

Name of subdivision.	Type of industry.	Number of establishments.	Establishments experiencing difficulties on account of									
			Competition from						Want of			
			Indian mill-made goods.		Foreign goods.		Indian mill-made and foreign goods		Finance		Raw materials.	
			No.	P. C.	No.	P. C.	No.	P. C.	No.	P. C.	No.	P. C.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Murshidabad												
Sadar	Independent	34	3	9	4	12	23	68	20	59	11	32
	Dandadari	6	..	..	..	..	..	..	1	17	..	..
	Sub-total	40	3	8	4	10	23	58	21	52	11	28
Nadia												
Ranaghat	Independent	13	..	..	..	..	9	69	13	100	12	92
	Sub-total	13	..	..	..	..	9	69	13	100	12	92
	Grand total	53	3	6	4	8	32	60	34	64	23	43

Name of subdivision.	Type of industry.	Number of establishments.	Establishments experiencing difficulties on account of									
			Want of						Ill remuneration.		Existence of mahajan as middleman.	
			Machineries and tools.		Marketing facilities for sale of finished goods.		Work.					
			No.	P. C.	No.	P. C.	No.	P. C.	No.	P. C.	No.	P. C.
(1)	(2)	(3)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
<b>Murshidabad</b>												
Sadar	Independent	34	..	..	1	3	..	..	..	..	..	..
	Dandadari	6	..	..	..	..	4	67	4	67	..	..
	Sub-total	40	..	..	1	2	4	10	4	10	..	..
<b>Nadia</b>												
Ranaghat	Independent	13	10	77	9	69	..	..	6	46	9	69
	Sub-total	13	10	77	9	69	..	..	6	46	9	69
	Grand total	53	10	19	10	19	4	8	10	19	9	17

Note.—An establishment may face difficulties from one or more sources.

Table 9-2—Willingness to join co-operative societies

Name of subdivision.	Type of industry.	Number of establishments.	Establishments.					
			Not in favour of co-operative societies.		In favour of co-operative societies.			
					Willing to join.			
					Already joined producers society.		Marketing society.	
(1)	(2)	(3)	No.	P. C.	No.	P. C.	No.	P. C.
			(4)	(5)	(6)	(7)	(8)	(9)
<b>Murshidabad</b>								
Sadar	.. Independent	.. 34	9	26.47	17	50.00	5	14.70
	Dadandari	.. 6	1	16.67	1	16.67	2	33.33
	Sub-total	.. 40	10	25.00	18	45.00	7	17.50
<b>Nadla</b>								
Ranaghat	.. Independent	.. 13	..	..	13	100.00	..	..
	Sub-total	.. 13	..	..	13	100.00	..	..
	Grand total	.. 53	10	18.87	31	58.49	7	13.21

Name of subdivision.	Type of industry.	Number of establishments.	Establishments.							
			In favour of co-operative societies.							
			Willing to join.							
			Consumer's Society.		Credit Society.		Multipurpose Society.		Any type of Society not specifically mentioned.	
			No.	P. C.	No.	P. C.	No.	P. C.	No.	P. C.
(1)	(2)	(3)	(4)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
<b>Murshidabad</b>										
Sadar	.. Independent	.. 34	2	5.88	..	..	1	2.94	2	5.88
	Dadandari	.. 6	..	..	..	..	..	..	2	33.33
	Sub-total	.. 40	2	5.00	..	..	1	2.50	4	10.00
<b>Nadla</b>										
Ranaghat	.. Independent	.. 13	..	..	2	15.38	4	30.77	2	15.38
	Sub-total	.. 13	..	..	2	15.38	4	30.77	2	15.38
	Grand total	.. 53	2	3.77	2	3.77	5	9.43	6	11.32

Note.—An establishment may be willing to join one or more types of co-operative societies.

**State Statistical Bureau**

Name of Industry in Block Letters.....

**District.....( ) Police-station.....( ) Town..... ( )**

Union/Ward No..... House/Holding/J. L. No..... Village/Street.....

**Family head.....**                      **Sample No.....**

Name of owner of the establishment..... Relationship of the owner with

**family head.....**

[illegible]

**SECTION C—Assets and Liabilities of the establishment on the date of enquiry**

Assets.	Value. (Rs.)	Annual Rent. (Rs.)	Liabilities (Loans) Ac- count.	Source.	Amount. (Rs.)	Rate of interest (per cent. per annum).
(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) Land and building ..			(1) Land and buildings	(a) .....		
(2) Machineries ..				(b) .....		
(3) Tools ..				(c) .....		
(4) Stocks of raw materials ..			(2) Machineries and tools.	(a) .....		
(5) Stocks of finished goods ..				(b) .....		
(6) Stocks of semi-finished goods ..			(3) Raw materials ..	(a) .....		
(7) Stocks of furniture, etc. ..				(b) .....		
(8) Total amount due for supply of finished goods.			(4) Others ..	(a) .....		
(9) Cash in hand and at Banks						
Total Assets ..			Total ..			
8(a) Amounts due for supply of finished goods during last year.			3(a) On account of raw materials purchased last year.			
8(b) Advance made for supply of materials, lands, etc.						

**SECTION D—Expenses on Raw materials during last year**

Items consumed.	Unit.	Quantity consumed during the year.			Purchase value.		Period of credit (General).	Source (M/Co/Mj/ DB/DX).
		Purchased from local market.	Purchased from outside.	Total.	Cash. Rs.	Credit. Rs.		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
I. Raw materials—								
(a) Basic materials—								
(i) ..								
(ii) ..								
(iii) ..								
(iv) ..								
(v) Others ..								
(b) Auxiliary materials—								
(i) ..								
(ii) ..								
(iii) ..								
(iv) ..								
(v) Others ..								
(c) Others ..								
II. Annual Repairs charges								
III. Packing materials								
Total ..								

M=Market.  
CO=Co-operative.  
Mj=Mahajan.

DB=Dadandar (Bengali).  
DX=Dadandar (Non-Bengali).

**SECTION E—Production during last year**

Serial No.	Name of products and work done.	Production.				Sale.		Agency for sale: Own Wholesale (OW), Own Retail (OR), Dada-der (DB/DX), Co-operative (C), Mahajan (Mj.)	P.C. rise or fall in demand compared to last few years.
		Unit.	Quantity.	Value. (Rs.)	Annual capacity of production under existing condition.	Quantity.	Value. (Rs.)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
I	Finished products ..								
	Total ..								
II	By-products ..								
III	Amount received for work done for others on materials supplied by them.								
(a)									
(b)									
(c)									
	Total ..								

IV Whether any difficulty experienced on account of competition from Indian mill-made goods (IM) or from foreign goods (F):  
.....No.—Yes/IM/F

**SECTION F—Names of markets as known to the establishment, in which the products of the establishments are mainly sold to consumers**

[illegible]

**SECTION G—Details of machineries and tools as on the date of enquiry**

Name.	Number.	Value. (Rs.)	Annual rent. (Rs.)	Manner of acquisition P/H/D/B/ DX.	Life in years.		
					Expected total.	Balance.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6A)	(6B)	(7)
(1) Machineries ..							
(i) ..							
(ii) ..							
(iii) ..							
(2) Tools ..							
(i) ..							
(ii) ..							
(iii) ..							
(iv) ..							

P = Purchased.

H = Hired.  
DB—Dadandar (Bongali).

DX.—Dadandar (Non-Bengali.)

### SECTION H—Relationship with dadandar

I. If any help is taken from Daaland—Yes/No.

II. If yes, nature of help taken.....

**Money against finished goods.....**      **Raw materials against finished goods.**

Other kind of help.....

### III. *Details of dadan.*

[illegible]

**SECTION I—Labour account for last year : Family Labour**

Serial No.	Relationship with owner.	Age.	Sex.	Number of months engaged last year.				Remarks, if any.
				Family industry.	Other family work.	Outside work.	Total.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1								
2								
3								
4								
5								
6								
7								
8								
9								
Total								

**SECTION J—Labour account for last year : Hired Labour**

Serial No.	District of origin.		Age.	Sex.	Number of months worked in the family during last year.	Amount received last month from owner.			Amount received last year from owner.		
						Cash.	Kind. (Rs.)	Total. (Rs.)	Cash.	Kind. (Rs.)	Total. (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1											
2											
3											
4											
5											
6											
7											
8*											
Total											

Amount paid for work done through others (Rs.).

\*Casual labour.

**SECTION K—Consumption of fuel and lubricating materials, last year**

Items consumed.	Unit.	Quantity consumed.	Purchase value. (Rs.)	Remarks.
(1)	(2)	(3)	(4)	(5)
I. Fuel	..	..		
(a) Coal	..	..		
(b) Coke	..	..		
(c) Charcoal	..	..		
(d) Firewood	..	..		
(e) Fuel oil	..	..		
(f) Other fuel	..	..		
II. Electricity	..	..		
III. Lubricating Materials	..	..		
(a) Lubricating oils	..	..		
(b) Other lubricants	..	..		



[illegible][illegible][illegible]

**SECTION M2—Amount needed for improvement of the establishment****SECTION N—If willing to join co-operative—Yes/No**

Nature of improvement to be made. (1)	Amount required. (Rs.) (2)	(3)

**SECTION O—Occupation of the earners**

Serial No. as in B (1)	Occupation. (2) (3)		Average monthly income (except in family occupation). (4) (5) (6)			No. of months employed during last year. (7)
			Cash. (4)	Kind (Value). (Rs.) (5)	Total. (Rs.) (6)	
1						
2						
3						
4						
5						
6						
7						
8						
9						

**SECTION P—Annual income (last year)**

Source. (1)	Individual income. (Rs.) (2)	Family income. (Rs.) (3)	Total income. (Rs.) (4)
1. Not income from ..			
(a) Agriculture and Horticulture ..			
(b) Sale of milk, egg, etc. ..			
(c) Industry ..			
(d) Trade ..			
2. Profession ..			
3. Other occupation ..			
4. Rent received ..			
5. Interest received ..			
6. Remittances received ..			
7. Help ..			
8. Sale of assets ..			
(a) ..			
(b) ..			
(c) ..			
9. Drawing on pension and savings ..			
10. Loans ..			
11. Others ..			
Total ..			

**SECTION Q—Land owned and possessed (acres) as on the date of enquiry****(a) Cultivated land—**

- (i) Total acres owned.....
- (ii) Acres let out.....
- (iii) Khas cultivation [(i) — (ii)].....
- (iv) Let in.....
- (v) Total acres in possession [(iii) + (iv)].....

**(b) Land owned (other than cultivated)—**

- (i) Not available for cultivation.....
- (ii) Culturable waste.....
- (iii) Unculturable.....
- (iv) Others .....

Total

**SECTION R—Details of crops grown last year**

Names of crops.	Area (Acres.)	Crops grown. (Mds.)	Crops received.		Crops sold.		Crops consumed.	
			Quantity. (Mds.)	Value. (Rs.)	Quantity. (Mds.)	Value. (Rs.)	Quantity. (Mds.)	Value. (Rs.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Aus paddy ..								
2. Aman paddy ..								
3. Other kinds of paddy ..								
4. Pulses ..								
5. Jute ..								
6. Sugarcane ..								
7. ..								
8. ..								
9. Others ..								
10. By-products ..	×	×	×	..	×	..	×	..
Total ..	..	×	×	..	×	..	×	..

**SECTION 8—Family expenditure (last year) (excluding value of crops grown and consumed)**

Items.	Unit.	Last month.		Last year.		Items.	Last month. value.	Last year. value.
		Quantity.	Value. (Rs.)	Quantity.	Value. (Rs.)			
(1)	(2)	(3)	(4)	(5)	(6)	(1)	(4)	(6)
(a) Cereals ..						(Brought forward) ..		
(b) Pulses ..						8. Washing materials ..		
(c) Edible oils ..						9. Footwear ..		
(d) Vegetable ghee ..						10. Bedding ..		
(e) Salt ..						11. Furniture ..		
(f) Spices ..						12. Utensils ..		
(g) Sugar and gur ..						13. Toilet goods ..		
(h) Milk ..						14. Other miscellaneous purchases.		
(i) Butter and ghee ..						15. Services ..		
(j) Other milk products ..						16. Educational ..		
(k) Potato ..						17. Medical ..		
(l) Onions ..						18. Social ..		
(m) Other non-leafy vegetables.						19. Religious ..		
(n) Leafy vegetables ..						20. Amusements ..		
(o) Fish ..						21. Travelling ..		
(p) Meat ..						22. Loans repaid ..		
(q) Eggs ..						23. Litigations ..		
(r) Fruits ..						24. Loans advanced ..		
(s) Tea and coffee ..						25. Purchase of assets ..		
(t) Other food materials ..						26. Remittances ..		
1. Total food ..						27. Others ..		
2. Fuel and light ..								
3. Clothes ..								
4. House-rent and Taxes.								
5. Intoxicants ..								
6. Tobacco and cigarettes.								
7. Pan, supari, etc.								
Sub-Total ..						Grand Total ..		

**SECTION T—Agricultural expenses**

(1)	(2)	(1)	(2)
	Rs.		Rs.
1. Payments to labourers (cash) ..		(Brought forward)	
2. Payments in kind (value) ..		6. Purchase of cattle food ..	
3. Purchase of seeds ..		7. ..	
4. Purchase of manure ..		8. ..	
5. Repair of implements ..		9. Others ..	
(Carried over) ..		Total ..	

Signature of Investigator (in full).

Unit.

Date.

Signature of Inspecting Officer...

Date.

## APPENDIX B

*Extracts from the report submitted by the Assistant Superintendent, Krishnagore, on the manufacturing process in the button industry.*

"With simple tools and in a crude fashion the manufacture is carried on with hands. Generally the tools that are required for each unit of manufacturers are two grinding stones with one iron handle fixed in a wooden box, three pliers, two designing equipments locally called *chhak* and two boring instruments locally called *deral*, costing about Rs.54. The processes involved are (i) sizing, (ii) shaping, (iii) boiling for cleaning, (iv) smoothing, (v) drilling, (vi) designing, and (vii) colouring and glazing.

Each mother-of-pearl is cut into a few pieces by the use of pliers and then shaping follows. For removing the black portion of the pieces about 48 to 60 gross of such pieces are boiled in water for about an hour after mixing with about half a seer of lime and one seer of soda per maund. With the help of designing equipments called *chhak* lining and narrow elevation across the surface of the button are made. Next, polishing is done by holding the circular edges of the pieces against the grinding stone fixed in a wooden box containing some water in it. The grinding stone is rotated round an iron rod with hands. The pieces thus become round and smooth. By rubbing against the files different varieties of buttons, namely, 'maura', 'japany', 'forty', 'astani' are made, the specifications of which are not clearly known to the manufacturers of Milannagar. The *mahajans* have, however, a clear knowledge about these specifications while the manufacturers can better demonstrate than describe them. Holes are made with the help of a rotating tool called *deral* (drill).

Colouring and glazing are done by the *mahajans* with the help of another set of workers. The *mahajans* have their trade secret in respect of final processing, i.e., colouring and glazing. About twelve gross of buttons are boiled in a vessel made of brass metal with some amount of kerosene oil for about half an hour. Then the buttons are kept aside after leaving the kerosene oil contained in the vessel. This is done for the glazing purpose. In an aluminium vessel containing the buttons water is boiled for about twenty minutes. Next, nitric acid, the strength and proportion of which are kept secret from the manufacturers is mixed and the vessel is then shaken for five to seven minutes. The buttons are then washed with a slight quantity of indigo. Glazing is thus completed. This processing is done by the *mahajan* himself. The manufacturers are ignorant about the fury of nitric acid, intensity of heat required for boiling and the proportion of acid and other things. The *mahajans* are, perhaps, utilising the ignorance of these simple-natured manufacturers for getting a sizeable portion of the profit. Setting of the buttons is then made on the paste-boards with tin-foil pasted thereon generally by female labourers by using thread. On each tin-foil three dozen of buttons are set. A labourer gets about annas eight for setting buttons on twelve such tin-foils. For further glazing polishing is done on the tin-foils with the help of a brush. The buttons come thus ready for sale to the wholesale dealers.

The tools the manufacturers use and the manner of processing are all in a crude form. Their place of work is their little cottages and their help-mates are their wives and children. Largely they make their own equipments in their own way. The skill is handed down from the father to the son and indeed, every manufacturer inherits the accumulated skill and tradition of his family."

## APPENDIX C

*Extracts from the report submitted by the Assistant Superintendent, Berhampore, on the collection of jhinuks (mother-of-pearl).*

"The Bagdis or Santals who are generally engaged in picking up the mother-of-pearl from the *beels* are paid by the society in the following way:

Out of every maund of mother-of-pearl the society gets only ten seers without any cost and the remaining thirty seers are generally taken away by the society from the pickers at Rs.6 per maund. Thus a picker gets Rs.4.50 nP. as his labour charges in every maund of mother-of-pearl picked up by him from the *beels*. The transport charge usually spent by the society is Rs.2 per maund, i.e., they get raw materials at Rs.4.50 nP. plus Rs.2.60 nP. plus the usual rent they would pay. The estimated cost of mother-of-pearl, on an average, stands as Rs.7 to Rs.8 per maund."

## APPENDIX D

I. List of machineries, tools and accessories used by the industry—

- (1) Grinding machine.
- (2) Grinding stone (with handle).
- (3) Frying pan (iron).
- (4) Design dice.
- (5) File (coarse).
- (6) File (fine).
- (7) Pliers.
- (8) Drill.
- (9) Wooden box.
- (10) Flat drill bit.
- (11) Small wooden stool.
- (12) Scissors.
- (13) Handle.

II. List of raw materials consumed by the industry—

- (1) Mother-of-pearl.
- (2) Lime.
- (3) Soda.
- (4) Acid.
- (5) Kerosene.
- (6) Thread ball.

III. List of products manufactured by the industry—

Buttons of different quality, size and shape.





